

THF Literature Review

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EARLY CHILDHOOD CARE AND EDUCATION IN FIVE ASIAN COUNTRIES

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Introduction

Navigating the Literature

Increasingly, the world is looking to early childhood education for ready answers to equity and cost-efficient human capital investment. This literature review seeks to consolidate early childhood developments in Asia as a basis for The Head Foundation's (hereinafter referred to the Foundation) further research and advocacy in this vital area.

The literature review is preceded by a definition of terms in the *Terms of Reference* section on page 4. This is followed by a brief summary of key global research on early childhood, represented by economist and Nobel laureate, Professor James Heckman and Professor Jack Shonkoff of the Harvard School of Public Health in the *Why Early Childhood Care and Education (ECCE)* section on page 6, whose works provide background to UNESCO's early intervention literature as a means to eradicate intergenerational poverty, thus promoting social equity. UN-UNESCO ECCE directives are detailed in the *What does UN say about ECCE?* Section on page 6.

A general overview of the ECCE landscape in Asia-Pacific is then introduced in the *General Overview of Asia-Pacific ECCE* section on page 11, followed by a dive into individual country profiles in the *Country Profiles* section on page 12. Countries¹ (see Table 1: Basic statistics of selected Asian countries), differing in their income levels, population sizes, land area, cultural and political backgrounds, are selected as the Foundation's attempt to paint a picture of Asia/ECCE.

Table 1: Basic data of selected Asian countries

Countries	Income level	Population	Area (km ²)	Starting Well Index overall ranking (X/45)	PISA 2012 ranking (X/65)		
					Math	Reading	Science
1. China	Upper middle	1,401,587,000	9,596,961.0	42	1	1	1
(Shanghai's result)							
2. Indonesia	Lower middle	255,709,000	1,904,569.0	44	64	60	64
3. Singapore	High	5,619,000	719.1	29	2	3	3
4. South Korea	High, OECD member	49,750,000	100,210.0	10	5	5	7
5. Vietnam	Lower middle	93,387,999	332, 698.0	41	17	19	8

¹ South Korea is specifically selected on the basis of it being the highest ranking Asian country under the Starting Well Index-a 2012 Lien Foundation commissioned Economist Intelligence Unit (EIU) research programme that ranked ECCE in 45 countries.

Each country profile begins with the description of a country's ECCE status presented through five aspects, i) programme structure, ii) teacher qualification, iii) demographics, iv) funding and governance structure and v) public-private share, followed by the introduction of current concerns and recent developments. Finally, the literature review discusses common threads on page 27, followed by concluding thoughts on page 30.

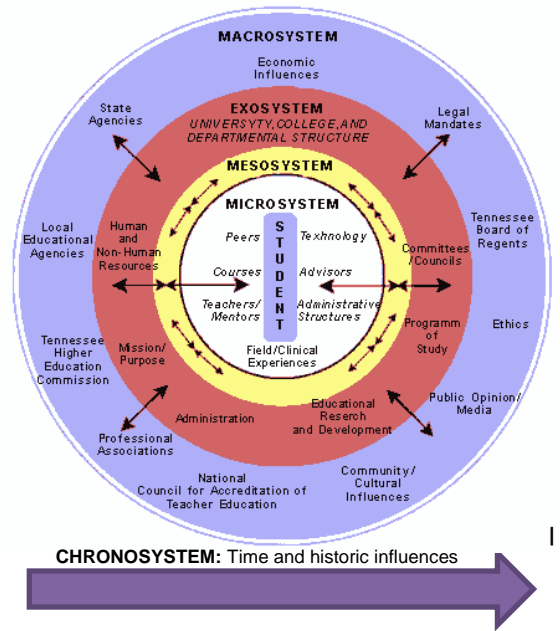
Terms of Reference

Early childhood spans the age range between the prenatal stages and early years of primary education, encompassing multifarious areas of provision, early stimulation, stable caregiver and child relationships, mental and physical welfare, and good nutrition.

As a result of an interplay of a multiplicity of factors (see Figure 1: Bronfenbrenner's bioecological model of human development-*modified by author*), early childhood care and education involves multiple stakeholders and is often referred to by different nomenclature.

For the purposes of this literature review, the document adopts UNESCO's terminology- Early Childhood Care and Education (ECCE) in scope and definition. UNESCO defines ECCE as "a range of processes and mechanisms that sustain and support development during the early years of life: it encompasses education, physical, social and emotional care, intellectual stimulation, health care and nutrition. It also includes the support a family and community need to promote children's healthy development" (UNESCO, 2012, p.4).

Figure 1: Bronfenbrenner's bioecological model of human development-*modified by author*



Why Early Childhood Care and Education (ECCE)?

As early as in the 1920s, professionals in pediatrics, education, and social work started working closely with psychologists. This marked the beginning of a vibrant and multidisciplinary investigation into early human development, picking up with exponential speed in the 1970s with measurement technology, computer-based analytic capacity, theoretical and conceptual advances playing a catalytic role (Shonkoff & Phillips, 2000, p.20).

The "scientific explosion" in the fields of neurobiology, behavioral, and social sciences, (Shonkoff & Phillips, 2000, p.20) pointed to the significance of early gene-environment interactions in a child's development and growth.

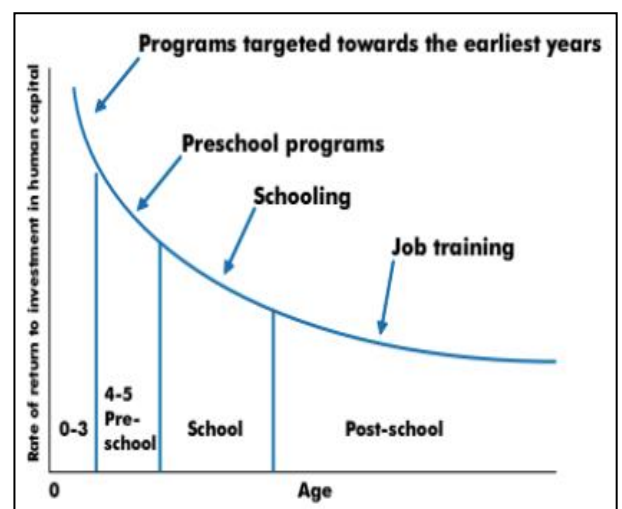


Figure 2: Returns to a unit dollar invested (Heckman, 2008, p.52)

In the syntax of economics, economist and Nobel laureate, Professor James Heckman, translated the potential of early childhood development into dollars and cents, pointing to great economic gains for society in their investment in early childhood development (The Heckman Equation, n.d.). These gains were to be in the form of a reduced reliance on remediation and correctional practices, which were not as cost-effective as an implementation of quality ECCE programs early in a child's life (see Figure 2: Returns to a unit dollar invested).

This was especially so when applied to the most disadvantaged of society, where disengagement from education early in children's education career incurs societal costs in the form of special education programs, school remediation programs, higher teacher to student ratios, health, rehabilitation and incarceration programmes, maintenance of a large police force etc. (Heckman, 2012), not forgetting, personal costs from derailment, missed opportunities, and unfulfilled potentials.

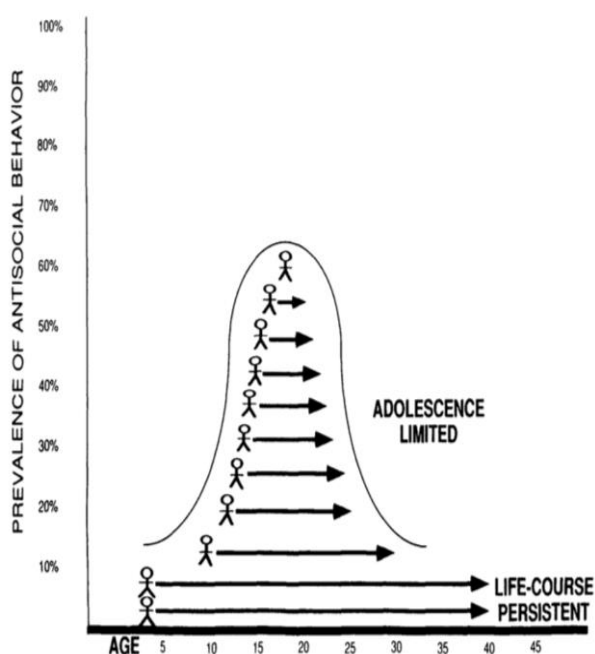


Figure 3: Hypothetical illustration of the changing prevalence of participation in antisocial behaviour across the life course (Moffitt, 1993)

Looking just at the aspect of anti-social behaviour, Moffitt (1993) observed that children displaying such behaviour in early childhood (see Figure 3: Hypothetical illustration of the changing prevalence of participation in antisocial behaviour across the life course) were likely to continue a life-course antisocial behaviour² that was stable, persistent, tending to be abusive and criminal in nature. Causes of early childhood antisocial behaviours were most often rooted in disadvantageous prenatal conditions (e.g. expecting mother experiencing toxic stress, consuming drugs etc.) resulting in neurological abnormalities, and aggravated by inconsistent

parenting behaviours after birth. However, the manifestation of anti-social behaviour in the early childhood years once again pointed to the importance of early intervention, and as early as possible.

Heckman opined that with early and quality ECCE, disadvantaged children will acquire both cognitive (e.g. IQ) and non-cognitive skills (perseverance, motivation, time preference, risk aversion, self-esteem, self-control, preference for leisure etc.) otherwise not supported for in their family environments, thereby improving their chances for economic success and better long-term health (Cunha and Heckman, 2007).

² On the other hand, anti-social behaviour displayed around puberty are likely to be temporary, in what Moffitt refers to as an adolescence limited period.

What does the UN say about ECCE?

Extending from Heckman’s research, UNESCO posits that early interventions (manifested as ECCE programs) play a crucial role in breaking intergenerational poverty and improving social equity and inclusion (UNESCO & UNICEF, 2012).

Table 2a-c: UN-UNESCO ECCE efforts, 1990 to 2016 from pages 6 to 8 recounts UN-UNESCO efforts to improve global ECCE provision in chronological order.

Table 2a: UN-UNESCO ECCE efforts, 1990 to 2016

Year	Milestone events / documents	Decision points
1961	UNESCO Memo, International Conference on Public Education, Recommendation #53	Two important principles were stressed: <ol style="list-style-type: none"> 1. Family is primary. However, despite family primacy, UNESCO notes the growing need for extra-familial education 2. Primary school is the priority
1972	UNESCO Memo, Pre-Primary Education: UNESCO’s Program, 1972 Memo	The memo stated that there was only “a general concern with pre-school education.”
Dec, 1974	Meeting of experts on the Psychological Development of Children and its Implications for the Educational Process	The meeting: <ul style="list-style-type: none"> • noted that preschool “can foster cognitive development without impairing creativity” and that “emotional and social development are not necessarily inhibited through efforts to enhance cognitive development” • concluded that a “comprehensive review of developments was not warranted” because of a slate of unresolved questions pertaining to the role of pre-primary education, whether it was necessary to include it in the education system, how to resolve the diversity of programs etc.
Nov, 1989	UN General Assembly	The meeting: <ul style="list-style-type: none"> • established the Convention on the Rights of the Child
Mar, 1990	World Conference on Education for All, Jomtien, Thailand	The meeting: <ul style="list-style-type: none"> • broadened the means and scope of basic education to include early childhood care and initial education • marked a new era of international cooperation in education fueled by optimism generated by the end of the Cold War • noted that the ECCE sector (relative to other education sectors) had been most rapidly expanding over the past decade • established the most critical determinants of the learning capacity of children as nutrition, health, and early social environment

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		<ul style="list-style-type: none"> • observed that the impact of ECCE programmes were more significant for girls (than boys) and for children from disadvantaged social groups (than those from more affluent homes) • advised a twofold policy response to early child development, namely: <ul style="list-style-type: none"> i) Health, nutrition, and social development programmes that played a <i>preventive</i> role, combating cognitive and behavioural disadvantages originating from malnutrition, disease, inadequate caregiving or an unstimulating social environment
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Table 2b: UN-UNESCO ECCE efforts, 1990 to 2016

Year	Milestone events / documents	Decision points
Mar, 1990	World Conference on Education for All, Jomtien, Thailand (con't)	<ul style="list-style-type: none"> ii) Wider and more equitable access to preschool that were not only preventive but <i>compensatory</i> and <i>reinforcing</i> in nature, potentially offsetting damage to infants that experience inadequate preconditions for learning
Jun, 1996	Mid-decade Meeting in Amman	<p>The meeting:</p> <ul style="list-style-type: none"> • revealed a sluggish progress and insufficient follow-up on the main actions that were agreed upon in Jomtien
Late 1990s	<p>There was a sense of urgency in putting the EFA agenda back on track, as indicated by two developments:</p> <ol style="list-style-type: none"> 1. The International Consultative Forum, the inter-agency body responsible for EFA monitoring, advocacy and partnerships, decided on an end-of-decade EFA assessment 2. Civil society organizations applied external pressure on the international community to act, demanding donors to increase aid. 	
Apr, 2000	UNESCO, World Education Forum, Dakar, Senegal	<p>The meeting:</p> <ul style="list-style-type: none"> • agreed on the Dakar Framework for Action, Education for All: Meeting our Collective Commitments • established six Education for All (EFA) goals • committed towards “Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children” (UNESCO, 2000), the goal was the first of six EFA goals, otherwise known as EFA Goal 1
2002	UN Millennium Project	<p>The meeting established two education-related Millennium Development Goals (MDG), targeted for realisation in 2015:</p> <ul style="list-style-type: none"> • MDG 2: Achieve universal primary education Corresponding target 3: ensure that, by

		<p>2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling</p> <ul style="list-style-type: none"> • MDG 3: Promote gender equality and empower women <p>Corresponding target 4: eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015</p>
2014	UNESCO Education Strategy 2014-2021	<p>UNESCO:</p> <ul style="list-style-type: none"> • noted that despite there being marked improvements in the areas of universal access to primary education and in the achievement of gender parity and equality, “progress on the other four EFA goals, however, has been more modest, especially with regard to expanding provision of early childhood care and education (ECCE)”

Table 2c: UN-UNESCO ECCE efforts, 1990 to 2016

Year	Milestone events / documents	Decision points
2015	UNESCO EFA Global Monitoring Report	<p>UNESCO:</p> <ul style="list-style-type: none"> • noted progress in increased children and adolescent attendance of school and achievement in gender parity • noted that inequality in education has increased, with the poorest and most disadvantaged shouldering the heaviest burden and that education remains under-financed by governments and donors <p>Specific to EFA Goal 1 on ECCE, UNESCO:</p> <ul style="list-style-type: none"> • noted 6.3 million children under the age of 5 dying in 2013 from causes that were mostly preventable, despite there being a drop in child mortality rates by nearly 50% • noted that one in four children were still short for their age (a sign of chronic deficiency in essential nutrients) despite progress in child nutrition • noted an increase of nearly two-thirds (in 1999) of pre-primary enrolment worldwide to 184 million (in 2012) <p>The report further observed that i) the involvement of the private sector remained high, a suggestion that inequalities prevailed, with the poorest and those who lived in rural areas taking the brunt and ii) the quest for curriculum quality was still not being meaningfully addressed.</p>

2016	UN Summit	<p>The meeting established one education-related goal Sustainable Development Goals (SDG), targeted for realisation in 2030:</p> <ul style="list-style-type: none"> • SDG 4: Quality Education <ul style="list-style-type: none"> Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Corresponding target 4.2: All girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
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If the 1989 Convention on the Rights of the Child signaled the beginning of worldwide attention towards ECCE, then the 1990 Education for All (EFA) world conference at Jomtien would mark the first commitment made by the international community towards ECCE.

Efforts were further consolidated at the 2000 Dakar World Education Forum where explicit ECCE goals were pronounced under EFA Goal 1: Expanding and improving *comprehensive* early childhood care and education, especially for the most *vulnerable* and *disadvantaged* children.

Observing persistent inequalities and *widening disparity gaps* and there being concerns over *curriculum quality*, at the recent 2016 UN Summit, Sustainable Development Goals (SDGs), SDG4.2: All girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.

ECCE in the Asia-Pacific Region

Asia demonstrates a greater diversity as compared to other major regions in that there is an enormous range of countries that differ in physical size, population size, histories, cultures, ethnicities and religions. While Asian countries vary in their perception towards girls' education and women's roles, some Asian countries have a long-standing history of valuing education and viewing education as a golden ticket to higher socio-economic status. Specific to the Asia-Pacific region, the increase in the average education of the labour force was coupled with a drastic decline in the fertility rate. Increased female participation in the labour force and less extended families signaled an increased demand for ECCE (Kammerman, 2006).

In the 2006 study, Kamerman also noted that in most countries, almost all children enrolled in at least a year of pre-school prior to primary school. There was a "substantial increase in coverage" between 1970 and 1990 and then again after 1990s (after Jomtien and Dakar). Figure 4: Pre-primary gross enrolment ratio, world and regions, 1990-2012 and 2015 (projection) marks Asia-Pacific's spurt in enrolment in the late 1990s, crossing the World average, and onward to a gradual growth similar to other regions, falling behind the growth in Europe, North America, Latin America and the Caribbean. Kamerman (2006) further observed that within the

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Asia-Pacific region, the increase was especially obvious in China, Korea, Thailand, and less so in India and the Philippines.

Figure 4: Pre-primary gross enrolment ratio, world and regions, 1990-2012 and 2015 (projection), (UNESCO, 2015-a, p.5)

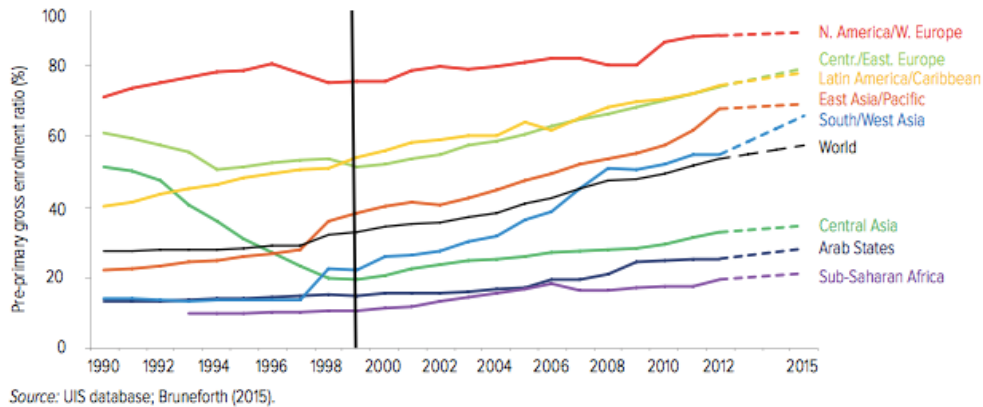


Figure 5: PPGER, 1990 and 2012 (with edits from author), (UNESCO, 2015-a, p.60)

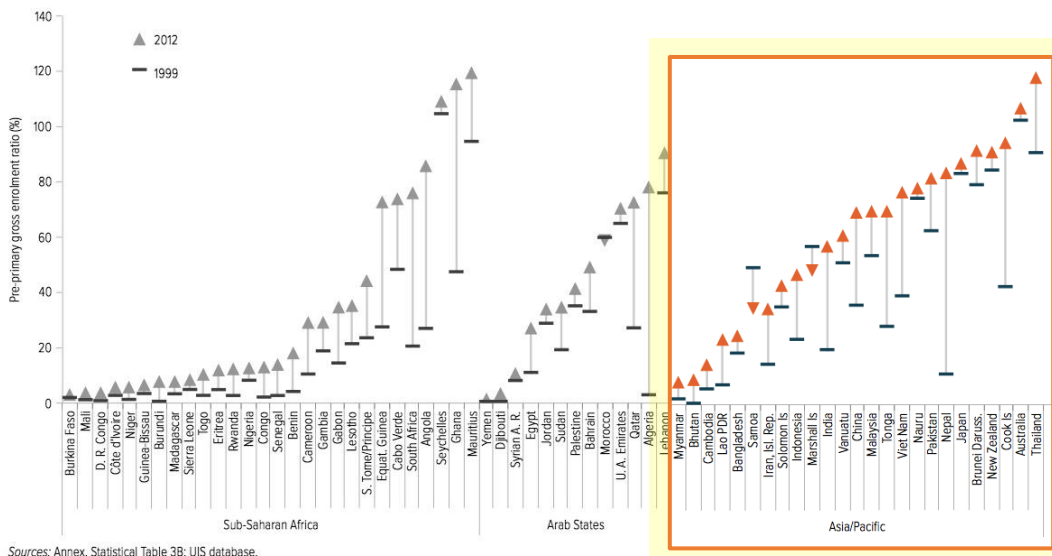


Figure 5: Pre-primary education gross enrolment ratio (PPGER), 1990 and 2012 illustrates the increase in pre-primary gross enrolment across countries in Asia-Pacific. While there is a general co-relation between the size of the economy and absolute PPGER (2012), the rate of growth varied between countries, with observable growth spurts in Vietnam (44%), followed by China (40%) and Thailand (28%). It is interesting to note too, that while Myanmar belonged to the lower-middle-income economy, the growth in the ECCE sector remained stunted relative to other lower-middle-income economies and low-income economies (see Table 3: Analysis of PPGER, 1999 and 2012), likely due to the wide income disparity and the low level of socio-economic development.

Table 3: Analysis of PPGER, 1999 and 2012

Size of economy	Country	Ranking (% of growth)	PPGER in 1999 (approx.)	PPGER in 2012 (approx.)	% growth (approx.)
Low-income	Cambodia	7	4%	20%	16%
Lower-middle-income	Indonesia	4	28%	54%	26%
	Lao PDR	6	8%	28%	20%
	Myanmar	8	2%	12%	10%
	Vietnam	1	42%	86%	44%
Upper-middle-income	China	2	40%	80%	40%
	Malaysia	5	59%	80%	21%
	Thailand	3	96%	124%	28%
High-income	Japan	9	90%	94%	4%

Asia-Pacific countries varied in their philosophies towards ECCE. There exists, largely two camps, one of which professes curriculum-centricity, viewing ECCE as a means towards Primary 1 preparedness while the other, child-centricity that is shaped by U.S. ECCE ideals. The former is largely perceived as the traditional approach, while the latter, the “Western-style, progressive” (Li, Wang, and Wong, 2011) approach.

Country Profiles

China

Programme structure

Children ages 3 to 6 attended full-day programs at kindergartens while children from ages 0 to 3 attended nursery schools.

Teacher qualification

Although it was mandated for all kindergarten teachers to at least hold an associate degree, 2012 statistics from the Ministry of Education Official Website showed that 47% of teachers held only associate bachelor degrees and 43% of teachers only a high school education or below (Song et al., 2014). Teachers from less developed provinces and rural areas tended to be less qualified than those in urban coastal regions. They also had very limited or no access to professional development opportunities, compared to their urban peers.

Demographics

Incomplete data set.

Funding and Governance structure

ECCE budget is apportioned at the provincial level and tended to go towards public kindergartens in urban areas within the province, seriously neglecting rural areas (Li, Pan, & Chen, 2015 in Li et al., 2016). Funding for the sector as a whole tended to be low accounting for only 1.24-1.44% of the country's total education budget, that translated to 0.05%-0.07% of the country's GDP (Yuan 2010 in Hu & Szente, 2009).

Song et al. (2014) estimated this amount to be 1% of the world's education budget that was to be shared across 20% of the world's population, unfair allocation further adding to the inequity of access to ECCE (Song et al., 2014, p. 363). Guided by the central government, local governments were responsible in the implementation of ECCE plans, finding themselves, many a time, "overburdened and underfunded" (BBC, 2016-b).

Public-Private market share

While both the public and private sectors each serve the same student population size, in sheer numbers, there were more private centres as compared to public centres. As non-recipients of government funding, private centres were not subjected to quality rating programs (Hu & Szente, 2009), suggesting a wide range in quality, a current reality of China's private ECCE landscape. Public kindergartens, on the other hand, tended to be better funded, better equipped and had a stable teaching force of better qualified teachers (Li et al., 2016).

Current concerns and recent developments

a) DAP³ and existing cultural threads

Kindergarten educational reform started in the early 1980s in response to i) the 1978 Reform and Opening-up policy (*gai ge kai fang* 改革开放) led by Deng Xiaoping and ii) the 1989 Convention on the Rights of the Child.

Guiding the ECCE education reform was the 1989 Regulations on kindergarten education practice, issued by the National Education Commission. The document took guidance from America's National Association for the Education of Young Children (NAEYC)'s policy statement for developmentally appropriate practices (DAP) and was positioned to strengthen China's labour force for a global economy [Yeh, Tobin, and Karasawa (2004) in Chien & Hui (2010)]. According to the document, a reformed ECCE was to be characterized by (1) Child-initiated activity, (2) Individual difference, (3) Importance of play, (4) Integrated curriculum and (5) Process of activities. Such Western ECE quality concepts were later reiterated as well in the 2001 Ministry of Education of the People's Republic of China's

³ DAP is a highly influential set of developmentally appropriate practices developed by America's National Association for the Education of Young Children (NAEYC). As Asian countries update and modernise their workforce, ECCE curriculum reforms looked to the DAP, perceiving it as progressive and likely to deliver a 21st century competitive workforce.

kindergarten education guideline (trial) (Ministry of Education of the People's Republic of China, 2001, in Li, Pan, Hu, Burchinal, De Marco, Fan & Qin, 2016).

However, while kindergarten campuses were replete with printed slogans like “respecting children”, “active learning”, and “play-based teaching and learning”, teachers struggled to internalize the true intentions of the DAP-guided reform, shaped by foreign education theories such as Dewey, Montessori, Bronfenbrenner, Bruner, Piaget and Vygotsky (Zhu and Zhang, 2008). In the McMullen et. al.'s (2005) study to examine the alignment with DAP across countries, the researchers noted there to be a weak relationship between self-reported beliefs and self-reported frequency of engagement instructional activities in the Chinese sample. While some academics attributed this “remarkable belief-practice gap” and “policy-practice gap” to China's degree of openness to Western influences--being only a “recent phenomenon” (as compared to other countries like South Korea and Taiwan) (McMullen et al., 2005, p. 462), others pointed to the top-down approach of the education reform that was said to be more interested in transforming educational ideas, and less in creating supportive conditions for such ideas [Liu, Pan and Sun (2004) in Liu and Feng, 2005].

Concerns were also raised as regards teacher quality, there being insufficient professional development, little to no firsthand experience of Western curriculum models, and a lack of well prepared teachers who had the capacity to accurately interpret and apply child-oriented educational theories. As a result, most teachers had only a superficial understanding of the theories, their ability to articulate western theories by no means commensurate with the enacted curriculum that is largely shaped by former Soviet Union teaching practices. On top of this, deeply entrenched Confucian ideologies, Maoism ideals, tradition and social values, the demands of a high-stakes examination-oriented education system, and parents that were not inducted to the DAP philosophies, were putting up a classic tug-of-war between the assertion of local context and the implementation of foreign theory.

b) A context-adapted ECCE quality assessment

It is also interesting to note that in Li et al.'s (2016) recent study⁴ of ECCE quality and child outcomes in Zhejiang province, researchers concluded that the research did not “provide strong and consistent evidence” in support of U.S. studies that suggested that low-income and at-risk children tended to benefit more from quality ECCE (Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000; Gormley, Gayer, Phillips, & Dawson, 2005; Votruba-Drzal, Coley, & Chase-Lansdale, 2004; Winsler et al., 2008, in Li et al., 2016). Rather, a subgroup analysis pointed to a factor in ECCE quality--quality of teacher-child interactions and direct teaching, that could potentially “be a predictor of cognitive and social developmental outcomes” for rural children and for children with lower educated parents (Li et al., 2016, p.435).

Using the Chinese Early Childhood Environment Rating Scale (CECERS), a context-adapted equivalent of the widely used Early Childhood Environment Rating

⁴ Li et al.'s study involved a relatively large number [i.e. 1,012 children from ages 3-6, 178 classrooms] of kindergartens in Zhejiang province. Through the use of a stratified and random sampling method, researchers used the CECERS to measure ECE quality.

Scale (ECERS), Li et al.'s research pointed to "high quality whole-group teaching" (Li et al., 2016, p. 435) – that was more culturally sensitive and likely to solve pressing concerns of providing basic ECCE to the disadvantaged children, bringing on significant impact in language, cognitive, and social skills acquisition of Chinese pre-schoolers. At the policy intervention level, Li et al. (2016) later advised for investments to be directed towards improving teacher credentials and practices and the introduction of process quality indicators in governmental program rating systems.

c) Disadvantaged children of rural migrant workers

Education, at large, for the children of rural migrant workers had been a hot potato for policy makers since the mass rural-to-urban migration in the mid-1980s. While both groups of children--those who joined their parents in the migration and those left behind with grandparents, relatives or sometimes alone in their hometowns, had very limited to no access to quality education, the latter group also lacked paternal and maternal figures and were ready-victims of abuse (e.g. sexual predation by male teachers) (BBC, 2016-b). Children left behind also faced emotional deprivation, were exposed to higher incidences of disease and lagged behind their more advantaged peers in terms of language, cognitive, emotional, social, and academic outcomes (Gai, 2008; Yao, 2011; Song & Liu, 2013, in Song et al., 2014).

In the case of children who migrated along with their parents, the access to public ECCE which provided better quality assurance, was limited as a result of their household registration (*hu kou 户口*). Different from that of their residing city, it makes their entry to public-funded centres an arduous uphill task. At best, they attended an "inexpensive, sometimes illegal or unlicensed private *Youeryuan*⁵" (Song et al., 2014).

In a 2014 study, Chinese ECCE researchers termed the plight of the children, an "urgent social risk", that required the immediate attention of "policymakers and researchers worldwide" (Song et al., 2014, p.356). Academics expressed concerns over the case of worsening opportunity gaps between the haves and have-nots, i.e. between urban and rural children (Hu, Zhou, Li, & Roberts, 2014, in Li et al., 2016), between children attending public and private programs (Bu, 2008, in Li et al., 2016) and between children of higher and lower socioeconomic statuses (SESs) (Zhang, Luo, Tao, Luo, & Dong, 2015, in Li et al., 2016).

However, in recent years, the central government had been carrying out policy interventions through the promulgation of A Compendium for China's Mid-and Long-Term Education Development: 2010-2020⁶, The Reform and State Council's Several Current Suggestions regarding Developing Preschool Education (Liu & Pan, 2013 in Song et al., 2014) and supporting the development of rural early childhood education with 34.1 billion RMB worth of funds (Song et al., 2014, p.362). The Chinese

⁵ *Youeryuan 幼儿园* is defined by the researches as centres/institutes that provide education and care for children from 3-6 years of age (Song et al., 2014, p. 364). This was different from the central government's definition (see pg 10).

⁶ The compendium declared that 95% of Chinese children should receive at least one year of preschool education, while 75% of children should receive a three-year preschool education by 2020 (Li et al., 2016)

government continued to recognise that access to quality ECCE was a significant means to address growing gaps between “economically vibrant areas and economically depressed rural areas” (The State Council of the People’s Republic of China, 2010, in Li et al., 2016, p.429).

Indonesia

Programme structure

ECCE is provided by the Ministry of Education and Culture (MoEC), the Ministry of Religious Affairs (MoRA), the Ministry of Home Affairs (MoHA), and the National Family Planning Board (BKKBN) in at least eight different forms.

Table 4: Different ECCE provisions in Indonesia (Hasan, Hyson, & Mae, 2013, p. 71)

	<i>Ministry of Education and Culture</i>	<i>Ministry of Religious Affairs</i>	<i>Ministry of Home Affairs with Ministry of Health Staff</i>	<i>National Family Planning Board</i>
Formal	Kindergartens (<i>Taman Kanak-kanak, TK</i>)	Islamic kindergarten (<i>Raudhotul Atfal, RA</i>)	–	–
Nonformal	Playgroups (<i>Kelompok Bermain, KB</i>)	Islamic kindergarten (<i>Taman Pendidikan Quran, TPQ</i>)	Integrated health service unit (<i>Posyandu</i>)	Toddler family groups (<i>Bina Keluarga Balita, BKB</i>)
	ECED Posts (<i>Pos-PAUD</i>)	–	–	–
	Child care centers (<i>Taman Penitipan Anak, TPA</i>)	–	–	–
	Other early childhood units (<i>Satuan PAUD Sejenis, SPS</i>)	–	–	–

Note: ECED = early childhood education and development.

Kindergartens (TK) and playgroups (KB) were more focused on education with a higher emphasis on play for KB and higher academic focus for TK. While the ECED services were intended to be age specific, the age of children attending such services were not always as neat, and age cut-offs are hard to enforce. For instance, as a result of local conditions, service availability, and family preferences, some 4- to 5-year-old children might still attend playgroups and some 6-year-old children might already attend the first grade of primary school.

Services also varied in its intensity (i.e. number of hours per session, number of sessions per week or month etc.) and quality with different types of services subjected to different standards. While government regulations provided guidance towards quality provision, quality varied widely according to local conditions.

Teacher qualification

Jung and Hasan (2014) noted that ECCE institutions were usually staffed by volunteer teachers with little or no training since very few institutions provided training for early childhood teachers. Even in cases when there were (training institutions), the transfer of knowledge into the classroom was unclear and there was a lack of quality assurance systems.

Demographics

Incomplete data set.

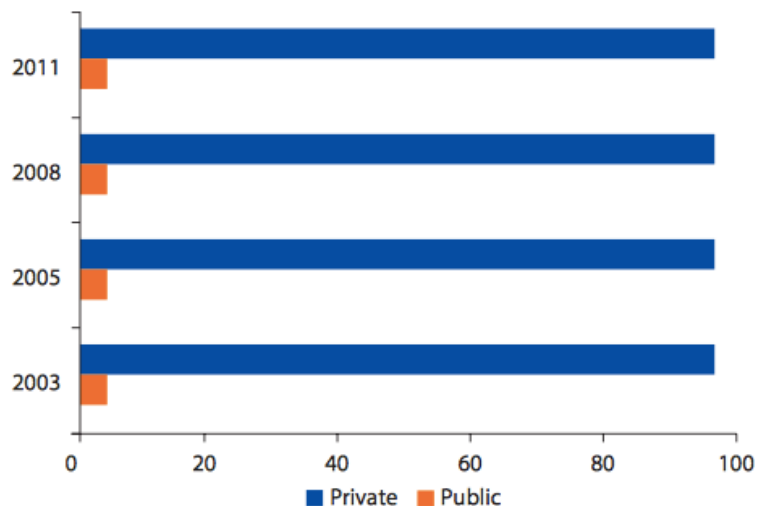
Funding and governance structure

It was unclear as to how much of the 20% of total government budget, committed to education by the Indonesian government in 2002, was channeled to ECCE. The finance of ECCE, however, comes from four primary sources a) MoEC, b) Local, district-level governments, c) end-users of ECCE services (through fee collection), and d) International organizations that support grants and loans (e.g. World Bank). While ECCE is provided by multiple ministries (see programme structure, page 13), an early childhood directorate under the Ministry of Education and Culture guided the ECCE development in Indonesia.

Public-private market share

The vast majority of kindergarten services were provided by the private sector with little public investment.

Figure 6: Indonesia's public-private market share in kindergarten services (Hasan, Hyson & Mae, 2013, p.72)



Current concerns and recent developments

a) Low-quality ECCE and wide disparities

Indonesia has experienced substantial progress towards middle-income status, showing strong economic growth and macroeconomic stability. However, wide disparities continue to prevail with educational resources biased towards the affluent urbanite.

Children in the poor rural regions continue to be subjected to the effects of poverty. The number of ECCE services were already low but because kindergarten programs charged fees, even when they were available (albeit staffed by volunteer teachers in small numbers and quality), children did not enroll in it. The other contributing factor to low enrolment is the lack of public awareness of the benefits of ECCE, hence a lack in demand. In cases where there had been collaborations

between government agencies, the cooperation was sparse, intermittent, and unsustainable (Sardjunani, Suryadi, & Dunkelberg, 2007).

b) Working alongside UNESCO/UNICEF/The World Bank

Equity and the expansion of ECCE access was coined as the main development objective of education in Indonesia as the government recognises ECCE as a viable solution to issues like stunting, high drop-out rates and low academic achievement.

Hence, spearheaded by the Indonesian government and supported by UNESCO/UNICEF and The World Bank, ECCE developments have been fast and furious in Indonesia's policy making rooms. Beginning with the establishment of a new early childhood directorate in 2001, ECCE was included in the 2003 National Education System Law and in the 2004 MoEC Strategic Plan (Recana Strategis or RENSTRA); National ECCE standards were pronounced in 2009 by the National Education Standards Board (2009); merging of the formal and informal ECCE under the Directorate General for ECCE in 2010; the first ECCE census was initiated in 2011 (Jung & Hasan, 2014).

In 2007, a large scale ECCE project [i.e. Early Childhood Education and Development Project (ECED)] was funded by The World Bank and the Dutch government. The research team observed positive effects in social competence, communication, general knowledge and pro-social behavior problems.

Financed by The World Bank, MoEC started to fund the private sector through block-grants, hoping to incentivise private sector providers in their delivery of ECCE services, serving children below the poverty line. Varying from US\$300 to US\$3,000, these grants were seed funds to cover private and not-for-profit institutions in their ECCE expansion and operations. In 2006, the block-grant programme was fine-tuned to include greater local government and community-driven decision making, and in-built mechanisms for the grants to be channeled directly to villages in need (Sardjunani, Suryadi, & Dunkelberg, 2007).

c) Cultural tensions and effects of over-privatisation

Formen and Nuttall (2014) observed tensions across a few fronts, namely i) Indonesia's official ideology of social justice and equality vis-à-vis the use of Muslim terminologies in ECCE policy frameworks [i.e. "...to foster children's sense of piety of the Only One God..." (Curriculum Center 2003, p.8, in Formen and Nuttall, 2014) and ii) Euro-centric developmental concepts vis-à-vis Indonesian cultural perception of children as 'little men' (National Education Forum 2003, p. 18., in Formen and Nuttall, 2014).

With the high involvement of private ECCE service providers, forming 99% of the total investment (UNESCO, 2005, p. 14 in Formen and Nuttall, 2014), Formen and Nuttall expressed grave concerns over the freedom these private providers had over the ECCE curriculum, and that their curriculum might not serve public interests and values. While the involvement of the private sector boosted enrolment, the unregulated curricular content might provide a good breeding ground for religious fundamentalism. Specifically, Formen and Nuttall spoke about the "intrusion of Shariah-ization" (Formen and Nuttall, 2014, p. 28) into ECCE. While associated with

post-colonial interdependence in the past, the Shariah⁷ (Islamic) law had now took on an “exclusive ideo-political framework” (Formen and Nuttall, 2014, p. 29) that might potentially differentiate, divide and stratify citizens, hence seriously attacking the social fabric within Indonesia, and likely beyond.

Singapore

Programme structure

There are two dominant types of ECCE programmes in Singapore, kindergartens and childcare centres. Childcare centres (infant care: 2-18 months & childcare: 18 months – 6 years of age), in addition to playing an educational role, cater to the needs of working parents whose children require adult supervision outside regular school hours. Kindergartens (children 4-6 years of age), on the other hand, play a purely educational role. In addition to childcare centres and kindergartens, there are also playgroups with a less formal curriculum that provide the opportunity for children to learn and socialise through structured and unstructured play.

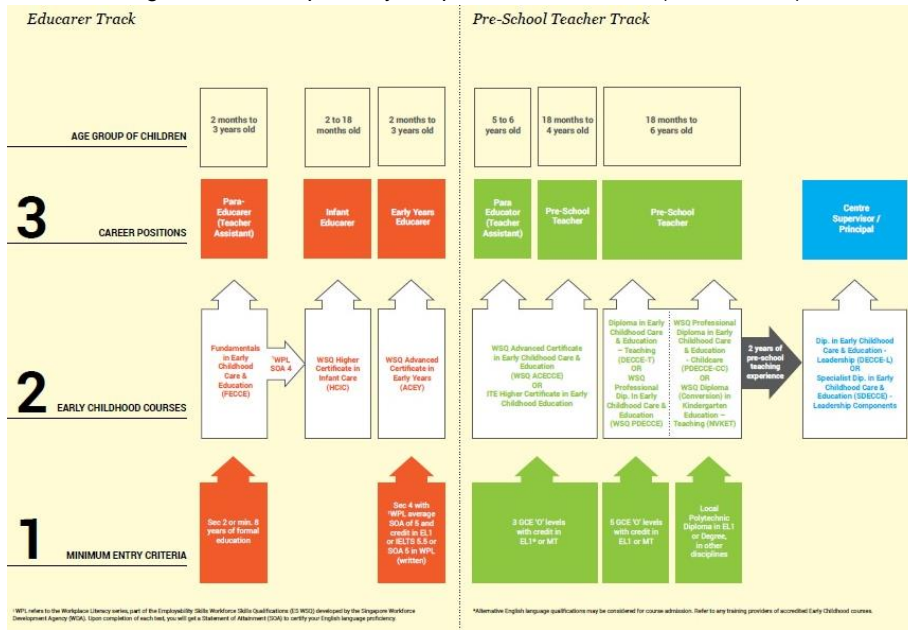
Teacher qualification

The minimum academic qualifications of pre-school teachers in both childcare centres and kindergartens had been raised in January 2009 with the sector now recruiting the middle one-third instead of the bottom one-third in the past. New pre-school teachers were to minimally possess five “O” level credits, including a credit in the English Language, and a Diploma in Early Childhood Care and Education – Teaching (DECCE-T). Both the Ministry of Education (MOE) and Ministry of Social and Family Development (MSF) target to have 75 percent of all pre-school teachers qualified with a Diploma in Pre-School Teaching by January 2013.

⁷ Shariah referred to the basic Islamic legal system derived from the Quran and the Hadith, governing basic Muslim behaviour across wide ranging domains from crime, politics, economics to personal matters like diet and hygiene etc.

Early Childhood Care and Education in Five Asian Countries

Figure 7: Career pathways of pre-school teachers (ECDA, N.D.)



Demographics

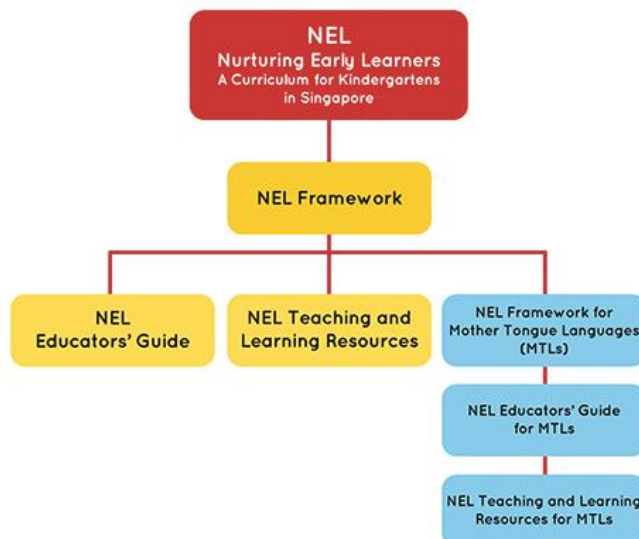
99% of all children going to primary one had attended at least one year of pre-school education (MOE 2012; MCYS 2012).

Funding and governance structure

An autonomous agency, Early Childhood Development Agency (ECDA), serves as the regulatory and development authority for the ECCE sector in Singapore. ECDA was established in 2013, and is overseen by MOE and MSF, and hosted by MSF. In MOE, the pre-school education branch provides curricular guidance through the Nurturing Early Learners (NEL) Curriculum (see Figure 8: The NEL Curriculum).

ECCE quality is monitored by licensing frameworks and ad-hoc checks by government agencies. The 2011 Singapore Pre-school Accreditation Framework (SPARK) encourages the voluntary participation of ECCE operators for a better standing in the market.

Figure 8: Nurturing Early Learners Curriculum (MOE, n.d.)

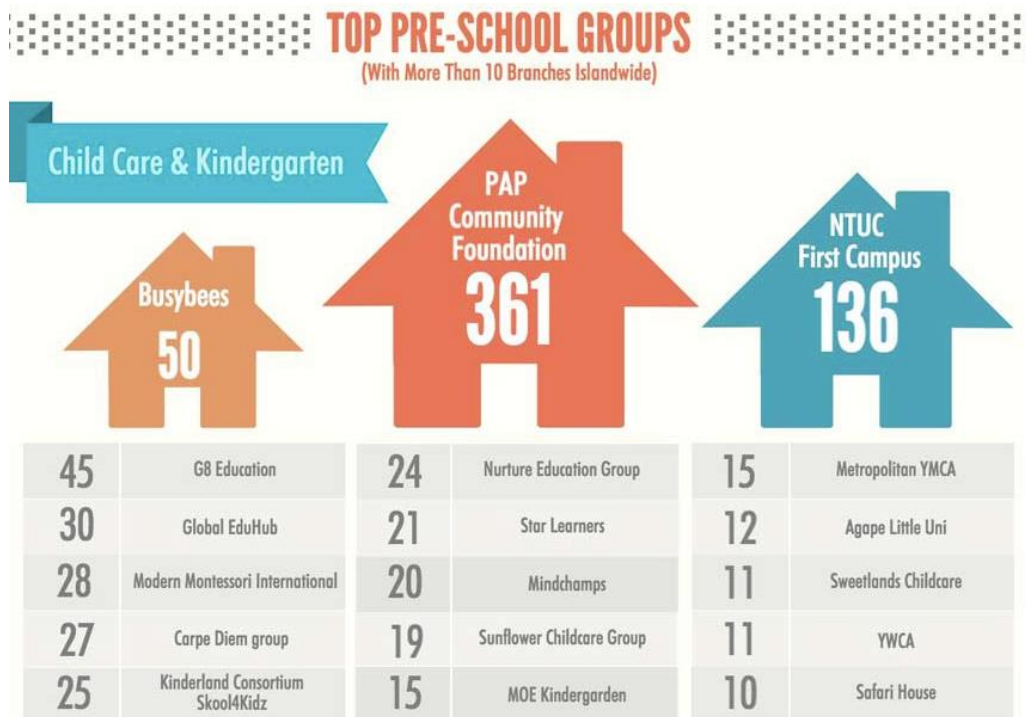


Subsidies, schemes, and funds have steadily increased over the years to help parents and operators defray cost. In 2013, the Singapore government also announced plans to double its spending in the ECCE sector.

Public-private market share

All ECCE provision is provided by private, non-profit or government funded service providers. Government funded service providers, like National Traders Union Congress (NTUC) and the People’s Action Party (PAP), the party that forms the government were in proportionally large numbers (see Figure 9: Top Pre-school Groups in Singapore). It was not until 2013, when MOE piloted the first five MOE kindergartens in the face of pressures from a burgeoning middle class. While the number of MOE kindergartens will steadily increase to 15 by 2016, it is not likely that MOE kindergartens will grow in significant numbers. Rather, they are positioned to be role-models for the market, for what a low-cost but high quality ECCE provision may look like.

Figure 9: Top pre-school groups in Singapore



Current concerns and recent developments

a) Pre-school to Primary one transition

With the downward pressures of the Primary School Leaving Examination (PSLE) at grade six, the primary one curriculum has become more rigorous over the years, with increasing demands for higher literacy and numeracy standards. The diverse ECCE landscape, on the other hand, presented a wide range not only in quality, but also in price point, teacher to student ratio, and in curricular direction – primary one preparedness, an academically inclined curriculum vis-à-vis a child centric play-

based curriculum. While MOE emphasised the importance of a play-based curriculum, and warned against a premature formalization of academic learning, the pressures of the primary one curriculum remains a reality parents and children had to grapple with.

b) Education as a social-leveller?

As a result of income inequality and variable quality of EC preparation, primary one students varied widely in their level of preparedness, with some eventually falling behind, with spiraling down effects as they progressed in school, causing serious concerns over inequality in Singapore. Ex-nominated member of parliament, Mr Viswa Sadasivan, most famously expressed his concern in his 2010 Pre-school education motion in parliament that “the education system instead of being a social-leveller could become an active contributor to the widening socio-economic gap” (Sadasivan, 2010).

In response to such sentiments, the Singapore government had introduced a big number of mitigating measures including subsidies for both operators and end-users, schemes to incentivize non-profit providers hence bringing market prices down, increasing minimum teacher qualification standards, increasing professional development opportunities, encouraging teacher retention, introducing curricular frameworks, self-assessment systems, and programmes to support left-behind children in their primary through secondary years etc.

c) Civil society’s participation in ECCE

Another noteworthy point is civil society’s ground-up participation in ECCE. One such example is the Etonhouse⁸ PCF collaboration ECCE centre in Singapore’s heartlands that aimed to bring high quality ECCE education to heartlanders and affordable prices. Another important player is the Lien Foundation, a local philanthropy that actively supports ECCE programs and research. The Starting Well Index, mentioned in the early pages of the literature review, was commissioned by the foundation.

South Korea

Programme structure

Korea’s ECCE is a bifurcated system of education and care facilities comprising of childcare facilities and kindergarten facilities. The childcare facilities catered to children ages 0 to 5, typically of low-income families with working mothers; the kindergarten facilities, on the other hand, catered to children 3 to 5 and to the middle

⁸ The Etonhouse International Education Group is one of the fifteen premium pre-school brands in Singapore. With ECCE centres situated in Sentosa, an offshore tourist hot spot, it is likely that the high range schools within Etonhouse represent the highest price point in ECCE provision in Singapore. This being said, Etonhouse, primary guided by the Reggio Emilia curriculum, delivers high quality ECCE with likely long-ranging positive effects on children’s growth supported by a lower teacher-to-student ratio and a highly conducive learning environment.

and upper income market (Yun, 2009). While the childcare facilities had played a primarily child minding role in the past, the newly introduced Nuri Curriculum standardised curriculum offerings across childcare and kindergarten facilities, hence introducing a strong education component in childcare facilities.

Teacher qualification

The minimum qualification for kindergarten teachers is graduation from a two-year college; the minimum qualification for daycare teachers was the completion of high school coupled with an additional one-year training.

Demographics

Free education and care for children at age 5 were initiated in rural areas in 1999 for the first time and has become universal since 2012. It has been extended to include all 3 and 4-year-olds in 2013 (the enrollment rate for children ages 3 to 5 is almost 90%). Furthermore, free childcare has been provided to children ages 0 to 2 since 2012, and childrearing allowances are given to parents who do not use any ECCE services and raise their children at home (UNESCO, 2015-b).

As compared to other OECD countries, South Korea scored especially low in the areas of fertility and women's income equality (OECD, 2012).

Funding and governance structure

Kindergartens are administered by the Ministry for Education and Science, while childcare facilities come under the Ministry for Health, Welfare and Family Affairs. The ministries are supported by government research institutes like the Korea Institute of Child Care and Education (KICCE) and Seoul Early Childhood Education and Development Institute (SECEDI).

The Korea government previously spent little on childcare and education for three to five years olds and on family benefits through cash or tax measures. In addition, there were just a few paternity leave entitlements in place; fertility rates, gender equality median earnings and female employment rates also fell below OECD averages (OECD, 2012). To boost the low fertility rate, increase female workforce participation and reduce the burden on parents in terms of education cost, the government introduced financial subsidies for education and care expenses for five-year-olds in 2012 (EDB, 2014).

Public-private market share

The ECCE market share in Korea is detailed in Table 5: Number of children in day care centre and kindergarten.

Table 5: Number of children in day care centre and kindergarten (KICCE, 2015)

Unit: No. of people(%)

	Kindergarten			Day Care Center						
	Total	Public	Private	Total	Public	Social welfare corporation	Private	Family child care	Parent cooperation	Workplace
Total	652,546	148,269	504,277	1,496,671	159,241	153,727	775,414	366,250	3,774	39,265
	(100.0)	22.7	77.3	(100.0)	10.6	10.3	51.8	24.4	0.3	2.6

Current concerns and recent developments

a) Integration of kindergartens and childcare centres

There had been decade-long arguments with regards to the administrative issues of kindergartens vis-à-vis childcare centres, some of these issues include the market demand for a more integrated provision, i.e. kindergartens to provide care, and childcare facilities to provide education; the age that kindergarten and childcare facilities should target; the concept of “care” etc. In response, the government is currently focusing on integrating the two systems in a “3-year ECEC integration plan” (KICCE, 2015) that is overseen by the Office for Government Policy Coordination.

b) The Nuri Curriculum

The 2012 introduction of the Nuri (meaning ‘World’ in Korean language) Curriculum was the Korean government’s first attempt at integrating kindergarten and childcare curricula. Co-planned by both ministries (i.e. Ministry for Education and Science and Ministry for Health, Welfare and Family Affairs) and under the leadership of KICCE, the Nuri Curriculum was first rolled out for five-year-olds in 2012. The Nuri Curriculum was subsequently expanded to include three and four-year-olds in 2013.

Table 6: Comparison between the previous and current policy with the Nuri Curriculum (KICCE, 2013)

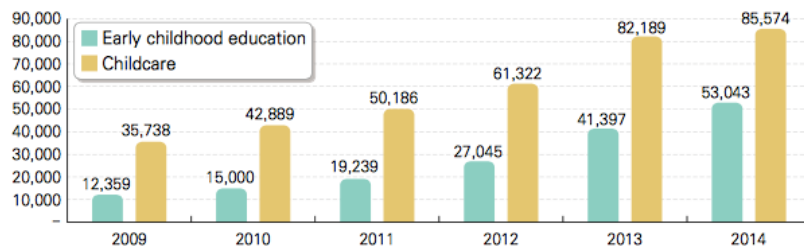
Category	Previous Policy	→	Current Policy with Nuri Curriculum (As from March 2012)
Curriculum	-National kindergarten curriculum -National childcare center curriculum		Nuri curriculum (one common national curriculum)
Recipients	Households below the 70% of all income levels		All households regardless of their income (100%)
Amount of financial support	-Public kindergartens (59,000 won per month) -Private kindergartens/Childcare centers (177,000 won per month in 2011)		-Public kindergartens (60,000 won per month) -Private kindergartens/Childcare centers (gradual increase: 200,000 won per month in 2012 to 300,000 won per month by 2016)
Financial source	Kindergarten and childcare center fees are funded separately		Kindergarten and childcare center fees are subsidized with financial grants for LOE equally
Supervising authorities	-Kindergarten (MOE) -Childcare center (MOHW)		Same as the previous

Child-centred and play-based, the Nuri Curriculum aimed to promote holistic development for children aged three to five, therewith establishing principles for becoming responsible citizens for society. It focused on five domains, i.e. Physical

Activity and Health, Communication, Experience in Art, Social Relationships, and Nature and Discovery. Based on the framework provided by the Nuri Curriculum, schools then develop and implement their school-based curriculum (KICCE, 2013).

The rolling out of the Nuri Curriculum marked the start of universal subsidy (instead of only for children below the 70% percentile in national income) for children from all family income levels and signaled the Korean government’s commitment to ECCE equity in Korea. The 2014 early childhood education (i.e. kindergarten) budget as compared to the 2009 budget, was raised by 4.3 times, while the early childhood childcare budget was raised by 2.4 times, signaling the government’s political will to improve the ECCE sector, likely in response to low fertility rates, low female work participation rate, and the society’s positive view on the impact of ECCE.

Table 7: Expenditure on ECCE as a percentage of GDP: 2010 – 2014 (KICCE, 2015)



[Figure 4] ECEC Budget⁷⁾

[Table 4] Expenditure on Early Childhood Education and Care Services as a Percentage of GDP: 2010–2014⁸⁾

Unit: One hundred million won(%)

	2010	2011	2012	2013	2014
Total ECEC Budget	65,662	85,162	98,286	136,434	149,459
% of GDP	(0.52)	(0.64)	(0.71)	(0.96)	1.01

Moving forward, the Korean government is looking to reorganize and consolidate the teacher training and certification system in 2016 (EDB, 2014).

c) Western ECCE theories in Korean classrooms

As a result of profound American influence on Korea’s ECCE, researchers had found Korea to offer an interesting and unique window in the study of the confluence between Asian and Western educational philosophies and practices. As in many countries in Asia, the Korean curriculum was also shaped by the DAP, in two separate studies, researchers had unanimously noted the prevalence of a teacher-centred pedagogy in Korean classrooms (Kwon, 2004 and Clarke-Stewart et al., 2006). There was a wide use of worksheets and drills, group teaching; teachers were observed to be more authoritative and strict, speaking in a top-down manner, less attention and time placed on talking to children at the individual level, less verbal and playful interactions with children; children were also more likely to display close to absolute obedience and respect for the teachers. Clarke-Stewart et al. (2006) noted that while Korean teachers, as compared to their Japan and China counterparts, took better cognizance of the value of play, the deeply embedded influence of the

Confucian culture were still evident in practice, in conflict with Western values documented in government curricular documents.

Vietnam

Programme structure

There were three types of institutions that provided ECCE, 1) nurseries (provided childcare for infants from three months to three-years old), 2) kindergartens (provided childcare for infants from three to six-years old), 3) pre-primary schools (dual function of nursery and kindergarten, provided for children from three months up to six-years old). All three types of institutions come under the supervision of the Ministry of Education and Training (MOET) through which MOET exercises centralized control (Hamano, 2010).

A 2004 MOET report stated that the enrollment rate for infants under three years of age was 16%, for children of three to four years of age was 62.6%, and for five-year olds was 92% (Hamano, 2007, in Thu, 2011). While the demand for infant care was high as a consequence of a high labour participation rate of Vietnamese women and high birth rates, academics attributed the low enrollment rate of infants to the existence of organically-formed and privately-run “family groups”, typically headed by older women with child-rearing experience. (Hamano, 2010; Phan, 2012).

As a result of the Vietnamese people’s emphasis on education and schools, Vietnam consistently achieved high levels of enrolment ratios (for both ECCE and primary education) and literacy rate as compared to countries of similar economic background.

Teacher qualification

The state stipulates that teachers for nurseries, kindergartens, and pre-primary schools should hold a high school graduation diploma with an additional two years of training and education. As of 2011, 70% of teachers in nurseries and more than 90% of teachers in kindergartens were qualified (Hamano, 2010).

Demographics

Incomplete data set.

Funding and governance structure

According to Thu (2011), the government allocated “only 8.22%” (Thu, 2011, p.15) of the national education fund (Civil society education fund, 2012, in Thu, 2011) to the ECCE sector. Hamano (2007) noted “extremely large” (Hamano in Thu, 2011, p.15) regional education disparities, that some researchers attributed to the recent “Socialization of Education” (xa hoi hoa giao duc) reform (see more on page 24), that encouraged the diversification of educational institutions and funding streams, privatizing education (Poon, 2009, in Thu, 2011).

The Vietnamese Congress issued the 2005 Vietnam Education Law that for the first time in history, included ECCE as part of the national education system. Positioned to prepare the children for the first grade, the law directed Vietnam’s

ECCE to develop children in the physical, emotional, intellectual, and aesthetical domains, with emphasis on inculcating distinctly Confucian-influenced Vietnamese traditional values (e.g. harmony, respect for grandparents, parents, teachers and elderly persons; attachments to siblings and friends etc.) through a comprehensive approach, involving play activities and “special attention to providing models, collective instruction, and encouragement” (Hamano, 2010; Thu, 2011).

Prior to the 2005 law, the amended law in 2000 stated the need for educational programmes to meet Vietnam’s needs in modernization and globalization. A 2009 Revision Act mandated the attendance of kindergarten for all five-year-olds while not providing it free of charge for its citizens (Noda, 2007, in Thu, 2011). All ECCE programs came under the supervision of the MOET (Thu, 2011).

Public-private market share

With the 2005 “Socialization of Education” reform, there has since been a rise in the number of non-public early childhood facilities. In a 2010 research paper, Hamano noted that 75% of infants attended non-public nurseries, while 53.7% of children attended private kindergartens. This was likely attributed to (1) the manifestation of ground-up support from the community to the “Socialization of Education” reform (Hamano, 2010), (2) emergence of private and international kindergartens (Phan, 2012) in affluent urban areas. This being said, as the extent of active citizenship, among other factors (e.g. socio-economic status, geographical accessibility etc.), varied widely in between regions, there is likely still to be dramatic variance in quality and access in between urban and rural areas (Kammerman, 2006).

Current concerns and recent developments

a) The “Socialization of Education” reform

With a cultural emphasis on education, government’s strong commitment to education, and the “communist tenet ‘Giving the best to young children’ ” (Phan, 2012, p.91), ECCE expansion in Vietnam had been relatively fast in comparison with similar countries since 1975. However, despite Vietnam’s state and society’s long-held interest in education, socioeconomic shifts (i.e. economic reform policy and the open-door policy since 1986) in the past three decades, that witnessed Vietnam’s shift from a centrally planned economy to a market-oriented economy, revealed “significant weaknesses of Vietnamese education” (Phan, 2012, p.90).

Concerns over graduates’ lack of initiative at work and poor practical, organizational and social skills (Hoang-Tuy 2004, 2005 in Phan, 2012) and growing societal pressure led to MOET’s implementation of radical education reforms aimed at i) shifting teaching and learning from a teacher-centric to a student-centric curriculum in the hopes of fostering thinking skills, independence and creativity, and ii) creating closer connections between school and real life (MOET 2010; Vietnam Government 2001; in Phan, 2012).

A crucial part of the reform was the “Socialization of Education” policy implemented in 2005 as part of the Vietnam Education Law. This policy takes on a socialist approach towards education-the noble notion of a village raising a child, that

translated to i) a diversification of education funding sources, ii) a diversification in the forms of school establishments and 3) inviting non-governmental actors to promote educational activity projects (Hamano, 2010).

However, in its implementation across widely diverse regions (in terms of citizen awareness, geography, ethnicity, and economic diversity), the reform resulted in widening disparities, the market economy shaping the growth of profit-driven private establishments in urban areas while ECCE access for children in mountainous and rural areas remained poor (Hamano, 2010).

b) Competing cultural threads and challenges for the reforms

Similar to China, Vietnam is a hybrid nation of three cultural threads—thousands of years of Confucian traditions, five decades of communist ethos, and the recent arrival of Western values (Ashwill and Thai, 2005, in Phan, 2012). The struggle in Vietnam to incorporate Western child-centred values is similar to that of China as teachers battled with their natural tendencies to teach in a more rigid, authoritarian, top-down manner; and parents tended towards excessively indulging and over-protecting their children.

However, unlike China, (likely due to the very much smaller land area and population size, the Vietnam 0-14 years old population was approximately a tenth of China's) the Vietnam government was more adaptive to changes, as the society morphed from a government-subsidised economy to a market economy in the last three decades. From the Program of Care and Education for Preschool Children (also known as the Old Program-OP), the government introduced the Innovative Program (IP) in 1989, as a first attempt to revolutionize ECCE. The IP adopted Western concepts, stressing on children's autonomy in learning, children's interests as reference for learning activities, and the experiential aspect of learning. IP however, was soon seen as a transitory half-baked attempt, and the government introduced the New Program (NP) in 2005, followed by a refinement of NP in July 2009, after four years of piloting. The NP marked an even higher degree of autonomy and flexibility in teaching and learning, giving teachers autonomy in choosing the content and length of topics, and inviting children's direct involvement in the curriculum planning process (Phan, 2012).

c) Quality ECCE for disadvantaged children

Despite such measures, World Bank Country Director, Victoria Kwakwa (UNICEF, 2014) remarked that there was room for improvement in terms of the supply and quality for ECCE, there being only seventeen (of fifty-eight) provinces that achieved universal pre-school education for five-year-olds. Kwakwa further highlighted the persistent issue of inequality experienced by disadvantaged children (i.e. ethnic minority children, children with disabilities, children living with HIV/AIDS, and those prone to disaster and climate change) and urged for a "comprehensive investment into ECE across Vietnam" (UNICEF, 2014). The Asian Development Bank (ADB, n.d.) cited that one-third or more Vietnamese children did not have their basic needs met (e.g. stunted because of chronic malnutrition, not fully immunized, no access to sanitation etc.), likely with higher prevalence in the northern mountainous regions, the north east and in the Mekong River Delta.

This being said, it is still fair to conclude that the Vietnamese government recognizes pre-school education as an integral part of the national education system, feeding the human resource development of the country. The government, however, continues to urge different stakeholders (i.e. family, community, and the private sector) to “join hands” (Deputy Minister of Training and Education, Nguyen Thi Nghia in Save the Children, 2014) in ECCE development citing limited government resources.

Conclusions

Common Threads

Certain common threads can be discerned in the country profiles of the five countries.

a) Asia’s curricular shift and International ECCE curriculum standards
At the policy level, all countries had charted new ECCE directions with reference to Western ECCE philosophies, guided by the NAEYC DAP. Moving away from an academically focused curriculum, policy papers now included child-centricity as an aspirational goal, recognizing the importance of a shift from teacher-centricity to child-centricity. The general belief undergirding this shift was that a Westernised ECCE curriculum marked progressiveness and was likely to nurture a 21st century competitive workforce, eventually translating to economic gains.

OECD cited research that had demonstrated the long-term positive effects of a child-centred curriculum (vis-à-vis a direct instruction curriculum) on behavior, cognitive and non-cognitive skills (e.g. motivation to learn, creativity, independence, self-confidence, initiative etc.), while recognizing the significance of academic components (i.e. literacy and numeracy) in its preparation for future learning and the immediate transition to primary one (see Table 10: Effects of academic and comprehensive curriculum models).

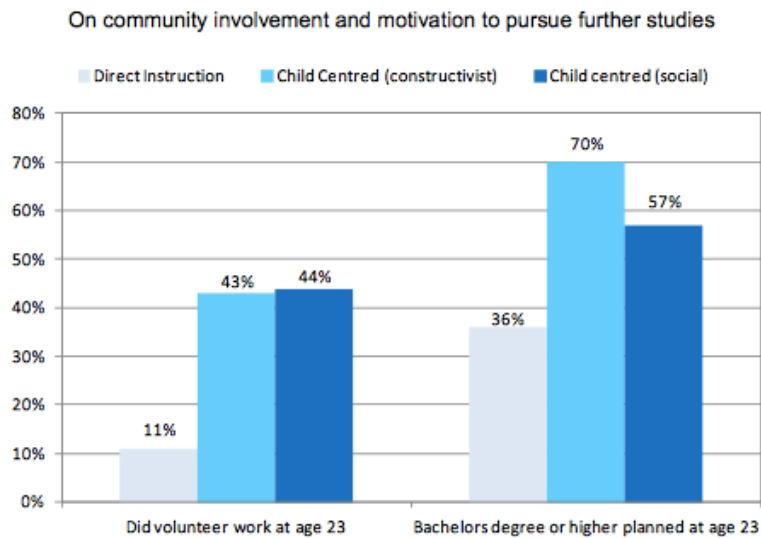
Table 8: Different curriculum models’ effect on school behaviours (OECD, 2012)

	Direct instruction	Child centred (constructivist)	Child centred (social)
Misconduct at age 15	14.9	5.9	8.0
Ever been expelled from high school	16.0%	5.9%	8.0%
Total number of classes failed	9.6	5.0	4.9

Notes: For “Misconduct at age 15”, the sum is out of 18 possible criteria of misconduct. For “Ever been expelled from High School”, this is the percentage of sample group members that had been expelled from High School. For “Total number of classes failed”, this is the number of classes failed by per member of sample group (asked at age 23). Results are from a study of different curriculum models impact on disadvantaged children in New Jersey. The sample groups are randomly selected and have comparable socio-economic backgrounds and other background characteristics. “Child Centred (constructivist)” is a High/Scope curriculum model, “Child Centred (social)” is a Nursery School programme with a focus on social skills. Both curriculum models place stronger weight on child-initiated activities.

Source: Schweinhart and Weikart, 1997.

Table 9: Impact of different curriculum models



In an attempt to characterize high quality ECCE curriculum, OECD mentioned Bennett (2004) and Siraj-Blatchford (2010) who defined high quality ECCE curriculum as curricular practices where both cognitive and social development were perceived as complementary and of equal importance, cautioning against “mixed models” that were not successfully integrated (OECD, 2012, p. 22).

Table 10: Effects of academic and comprehensive curriculum models

Which "model" is most likely to improve a child's...	Academic	Comprehensive
IQ scores	X	
Motivation to learn		X
Literacy and numeracy	X	
Creativity		X
Independence		X
Specific knowledge	X	
Self-confidence		X
General knowledge		X
Initiative		X
Short-term outcomes	X	
Long-term outcomes	X	X

Source: Pianta *et al.*, 2010; Eurydice, 2009; Laevers, 2011; Schweinhart and Weikart, 1997.

However, this being being said, there was likely to be a large implementation gap between the Asian policy documents and the enacted curriculum. This was because child-centred values go up against values like teamwork and conformity ingrained in Asian cultures; democratic classroom practices that deviated from age-

old top-down teacher-centred pedagogy were also hard to internalize, especially so in countries struggling with a lack of professional development resources.

Even in South Korea, Asia's forerunner in ECCE, classroom practices were hardly child-centric [see page 23, section a) Western ECCE theories in Korean classrooms] in its true essence. Swinging to the other extreme, Indonesia (ranked 44 of 45 countries in the Starting Well Index), in its acceptance of aid from The World Bank and the Dutch government, seemed ready to accept Euro-centric ECCE interventions in the face of more fundamental and widespread children developmental issues such as stunting. However, the presence of Islamic ideologies in policy documents, issues of over-privatisation and under-regulation point to brewing problems in implementation.

b) What counts as a 21st century Asian ECCE curriculum?

NAEYC's leadership in ECCE is apparent in Asia. A low student to teacher ratio, elements of a child-centric curriculum are on the wish list of most Asian countries. However, when implemented, it is often not without its fair share of contention. In countries where they had been, seemingly, less resistance, a reality ground check reveals a rather superficial adaption of Western ideals held back by a strong hold of national and cultural identity, pressures and social mores and ways.

The hypothesis hence was, if there were a problem, it would have warranted a need for change, but what if there weren't a problem in the first place? The of-cited educational anthropologist and early childhood specialist, Professor Joseph Tobin introduced the dichotomy of "problem" vis-à-vis "exceptionalism". Citing two ECCE systems, that of Japan and French, he argued that both countries would have failed miserably⁹ if measured against the NAEYC DAP, but had managed to produce a workforce that was equally and no less successful than their counterparts in other first world countries (Tobin, 2005).

It is interesting to note that both Japan and French happened to be fairly well-to-do countries with exceptionally strong national identities and a rather homogeneous makeup; hence might they have stood a better chance in their development of a contextualised, successful and unique approach to ECCE. However, in countries, areas and regions, where basic human needs (i.e. physiological needs) were not met and resources were painfully lacking, issues like contextualization would naturally take a second place to feeding and nutritional concerns. While UNESCO had noted that low income countries tended to readily submit to foreign influences through the receipt of aid, it was likely that sensitivities had been raised and attempts had been made to contextualize ECCE aid as international organizations adopt a grounds up, community-based ECCE curriculum that tapped on local resources. The 2009 third edition of the NAEYC DAP has also been updated to better embrace contextual differences.

⁹ French took on an academically inclined teacher-centric approach to ECCE while Japan had high student to teacher ratios and adopted behaviour regulation methods that were considered unacceptable by NAEYC standards (Tobin, 2005).

c) Emergence of a single-body of accountability

On a positive note, many Asian countries had recognized the importance of a single-body for ECCE leadership and accountability. Indonesia collapsed its formal and nonformal ECCE provisions to establish a single directorate in MoEC; Singapore set up an autonomous agency, ECDA, to oversee all ECCE matters. These moves are aligned with UNESCO's suggestions of "clear coordinating mechanisms" (UNESCO, 2012, p.35) and a single-body of accountability. Integration efforts between the childcare and kindergarten systems also become possible with the rolling out of the Nuri Curriculum in South Korea.

d) Equity in ECCE access

With the exception of South Korea, all countries featured in this literature review mentioned equity as a key area of concern. From the children of rural migrant workers in China, to children in rural regions of Vietnam and Indonesia, to the children of low and middle income workers of meritocratic metropolitan Singapore, equity issues had been areas of discontent. Conservative public investment in ECCE on the part of Asian governments, meant that most of the ECCE sector was subjected to the free market economy, through which high quality ECCE became a priced commodity only the financially and economically able minority could purchase. The effects on those who could not afford private sector ECCE intensified as their children entered the primary school system.

While the high income countries such as Singapore and South Korea had mechanisms like a vibrant private tuition industry, and school remediation programmes to mitigate the gap, the golden period of child development had been missed, and such efforts have proven to be of little impact. Low and middle income countries, at this point in time seen unable to respond adequately to these issues. All should be concerned about the long term implications of increasing differences in education opportunity.

Another factor at play, is the geographic location of rural children in countries like China, Vietnam, and Indonesia, where there is little incentive to establish fee charging ECCE Facilities. Big country, also meant that policy implementation tended to become very challenging, because of the many hands directives and resources must pass through only to land on local bureaucrats with a slate of equally urgent and competing challenges.

In knowledge-based developed countries, the civil society might be able to step up the game through strategic leverage points. In Singapore, the Lien Foundation, the local philanthropy had enough influence and resources to commission the EIU Starting Well Index and other ECCE research efforts (e.g. Vital Voices for Vital Years) to inform the country of its state of ECCE from a third-party perspective. Likewise in Vietnam, initiated by the government, members of society came together to pool ECCE resources, to varying degrees of successes in various regions, in a direct correlation with the quality of the civil society. Governments also encourage civil participation by incentivizing operators through subsidies for operators (i.e. Singapore) and block grants (i.e. Indonesia, financed by The World Bank).

In lower middle and middle income countries where civil society is limited in its ability to effect change, the international organisations are sometimes involved

through longitudinal research, ICT platforms, funding schemes etc. Such efforts, with the end-goal of empowering locals to carry on the mission in a sustained manner were however, rarely scalable and sustainable.

The longevity of such interventions is dependent on a) the people's acknowledgement of a gap and wanting to close the gap, such as in the case of Indonesia, where little was known about the significance of ECCE, there was no push factor from the ground to effect ECCE; b) the reliability and accountability of the existing political frameworks; c) the governments' level of buy-in, whether they considered ECCE investment to provide high leverage points for their agendas; and finally, d) the political will and tenacity to effect and sustain change.

Concluding thoughts

All countries now recognise the impact of early intervention and are making concerted efforts towards the realization of Sustainable Development Goals (SDG) target 4.2, albeit at different stages of ECCE development. While there was a clear inclination towards child-centric ideals, implementation gaps remain wide due to contextual differences. In most Asian countries, perhaps with the exception of Japan and Taipei (Ng & Chia, 2014), public investment in the ECCE tended to be low, with consequences for equity.

Moving forward, possible areas of research include:

1. *Defining Quality Asian ECCE curriculum*
What counts as a high quality Asian ECCE curriculum? How could it effectively integrate Eastern traditional values with child-centric concepts? How might the teaching culture need to change?
2. *The Asian interpretation of Child-centricity*
Might there be an Asian alternative to child-centricity?
3. *Comparative study between Vietnam's and Indonesia's rural ECCE programmes*
Both countries received aid from international organisations in view of impoverished severely disadvantaged rural children, how did the two countries differ in terms of scalability and sustainability? What roles do the existing political and cultural frameworks play in the success of such interventions?
4. *Comparative study between Japan's, South Korea's and Singapore's ECCE landscape*
Japan was the only Asian country that deviated from NAEYC DAP guidelines, and seems to have achieved success. A study of Japan's ECCE landscape might greatly inform the way in which Asia could/should adopt NAEYC DAP or lead to other important discoveries of social levers. Singapore, unlike Japan, is in the early stages of a development of a national identity. Does it make Singapore better-placed to develop an amalgamation of East and West

ECCE ideals? A look at South Korea's ECCE landscape would also inform ways in which Western ECCE ideals were interpreted and views on perceived implementation gaps on the ground.

Annex: Key Early Intervention Case Studies

To observe how early childhood investments translated to economic gains, Conti and Heckman cited two early intervention investigations, the Abecedarian Project and the Perry Preschool Project, as being “particularly revealing” (Conti & Heckman, 2012). This was on account of the longitudinal nature of the study far into adulthood, and the aspect of random assignment in the selection of participants. The two America-based projects, that are oft-cited in early childhood literature, in particularly those that argued for increased investments in the sector, are summarized in Tables 11a & 11b: An outline of the Abecedarian Project and the Perry Preschool Project.

Table 11a: An Outline of the Abecedarian Project and the Perry Preschool Project

Factors / Project title	Abecedarian Project	Perry Preschool Project
Treatment group and control group	Randomly assigned 111 children born between 1972 and 1977 from low-income, multirisk families that were predominantly African American; 57 were assigned to the treatment group, and 54 to the control group.	Randomly assigned 123 children from low-income families that were predominantly African American; 58 were assigned to the treatment group, and 65 to the control group; Intervention took place between 1962 and 1967.
Intervention year	1972-1982	1962-1967
Cost per child /year:	\$12,955 (2010\$)	\$9,604 (2010\$)
Location of study	Orange County, North Carolina	Ypsilanti, Michigan
Data collection pattern	Follow up studies conducted at ages 12, 15, 21, 30 and 35.	Each year from ages 3 to 11, and on 14, 15, 19, 27 and 40.
Nature of Intervention	An intensive year-round, full-day intervention that started as early as infancy through eight. The two-stage treatment consisted of a <u>preschool intervention</u> focusing on early childhood education and a <u>school-age intervention</u> focusing on the initial schooling ages.	Daily 2.5-hour classroom session on weekday mornings, weekly 90-minute home visit by the teacher on weekday afternoons aimed at promoting parent-child interactions. The length of each preschool year was 30 weeks, and the program ended after 2 years of enrollment.
Curriculum	The LearningGames curriculum, specially developed by Sparling and Lewis [1979, 1984]	High/Scope curriculum, classified as an approach that promotes students' involvement and is highly

		interactive. Curriculum was geared to the children's age and capabilities, emphasized child-initiated activities that focused on fostering non-cognitive traits.
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Table 11b: An outline of the Abecedarian Project and the Perry Preschool Project

Factors / Project title (continued)	Abecedarian Project (continued)	Perry Preschool Project (continued)
Eligibility criteria	Requirement: No apparent biological conditions Weighted scale: <u>High Risk Index</u> (1) mother's educational level (last grade completed) (2) father's educational level (last grade completed) (3) family income (dollars per year) (4) father absent for reasons other than health or death (5) absence of maternal relatives in local area (6) siblings of school age one or more grades behind age-appropriate level or with equivalently low scores on school-administered achievement tests (7) payments received from welfare agencies in past 3 years (8) record of father's work indicates unstable or unskilled semiskilled labour (9) mother's or father's IQ \leq 90 (10) sibling's IQ \leq 90 (11) relevant social agencies in the community indicate the family is in need of assistance (12) one or more members of the family has sought counselling or professional help the past 3 years (13) special circumstances not included in any of the above likely	Requirement: Child IQ < 85 points ("educably mentally retarded") and between 70 and 85 points Weighted scale: <u>Cultural Deprivation Scale (Weikart, 1978)</u> that included factors like parents' average years of school at entry, father's occupational status at entry, and rooms/persons in home at entry.

	contributors to cultural or social disadvantage	
Major Findings	Major findings of the Abecedarian Project included significantly higher scores on intellectual and academic measures as young adults, significantly more years of total education, increased likelihood of attending a 4-year college, reduced occurrence of teenage pregnancy, and reduced reported incidence of marijuana use (Campbell, Ramey, Pungello, Sparling & Miller-Johnson, 2002). For further details, see <i>Annex 1a: Outcomes of the Abecedarian Project</i> .	The Perry Preschool Project, on the other hand, demonstrated a reduced trend in lawbreaking, increased earnings, increased home ownership, and high school graduation rate, significantly higher scores on academic and IQ measures from ages 5-15. For further details, see <i>Annex 1b: Outcomes of the Perry Preschool Project</i> .

Most recently, through the lenses of long-term impacts on health, Conti, Heckman and Pinto (2015) observed that in both the Abecedarian Project and the Perry Preschool Project, there were “statistically significant effects on the healthy behavior and health of their participants” (Conti, Heckman & Pinto, 2015, p. 29), with treatment effects particularly stronger for men.

	Perry	Abecedarian
Program cost	\$15,386	\$63,476
<i>Benefits</i>		
Child care	919	27,612
Compensation	79,743	37,531
K-12 schooling	8556	8836
College/adult ed.	-1309	-8128
Crime	173,959	0
Welfare	774	196
Compensation future gen.	?	5722
Maternal compensation	0	68,728
Health/smoking	?	17,781
Total benefits	\$262,642	\$158,278
Net present value	\$247,256	\$94,802
Benefit-cost ratio	9:1	2.5:1

Table 12: Benefit-cost comparisons for the Perry and Abecedarian studies (2002 dollars discounted at 3%) (Barnett and Masse, 2005)

From an economic benefit-cost analysis view point, Barnett and Masse (2005) estimated the benefit-cost ratio of 2.5:1 for the Abecedarian Program and a 9:1 for the Perry Preschool Project. Heckman (2012), on the other hand, estimated a 6-10% rate of return for the Perry Preschool Project, that which he described as higher than the standard returns on stock market equity (7.2%).

This being said, Heckman added that for the optimum value of investments, early investments needed to be followed up with “continued high-quality learning experiences” (Heckman, 2006), for early efforts to be sustained,

and that postschool investments reaped higher returns when applied to persons of higher ability.

Note

The views and opinions expressed in this paper are those of the author(s) and do not necessarily reflect those of The HEAD Foundation.

References

- ADB., (n.d.). *Community-based Early Childhood Care and Development in Vietnam*, ADB. Retrieved from ADB: <http://www.adb.org/sites/default/files/publication/28570/vie-early-childhood.pdf>
- Barnett, W.S. & Masse, L.N., (2005). *Comparative benefit-cost analysis of the Abecedarian program and its policy implications*, *Economic Education Review*. Retrieved from Sciencedirect: <http://nieer.org/sites/nieer/files/BenefitCostAbecedarian.pdf>
- BBC. (2016-a). Myanmar: Police guard for Aung San Suu Kyi after death threat, BBC. Retrieved from BBC News: <http://www.bbc.com/news/world-asia-35553264>
- BBC. (2016-b). China to protect migrant workers' 'left-behind' children, BBC. Retrieved from BBC News: <http://www.bbc.com/news/world-asia-35581716>
- Britto, P.R. et. al. (2012). Key to Equality: Early Childhood Development, The Consultative Group on Early Childhood Care and Development, Task Force for the Post-2015 Development Agenda, Yale University.
- Campbell, F.A., Ramey, C.T., Pungello, E., Sparling, J. & Miller-Johnson, S. (2002). Early Childhood Education: Young Adult Outcomes from the Abecedarian Project. *Applied Developmental Science*, 6, 42-57.
- Clarke-Stewart, K., Lee, Young., Allhusen, V., Kim, M., & Mcdowell, D. (2006). Observed differences between early childhood programs in the U.S. and Korea: Reflections of “developmentally appropriate practices” in two cultural contexts, *Journal of Applied Developmental Psychology* 27 (2006), p. 427-443
- Chien, C. & Hui, N. (2010). Creativity in early childhood education: Teachers' perceptions in three Chinese societies, *Thinking skills and creativity*, Volume 5, Issue 2, 2010, p. 49-60.
- Child Research Net. (n.d.) ECEC around the World, Basic Data, Asia, Child Research Net. Retrieved from Child Research Net: <http://www.childresearch.net/projects/ecec/>
- Conti, G. & Heckman, J. (2012). *The Economics of Child Well-being*, Discussion Paper Series, Forschungsinstitut zur Zukunft der Arbeit, No. 6930. Retrieved from: <http://hdl.handle.net/10419/67314>
- Conti, G., Heckman, J. & Pinto, R. (2015). The Effects of Two Influential Early Childhood Interventions on Health and Healthy Behaviours, National Bureau of Economic Research (NBER). Retrieved from NBER: <http://www.nber.org/papers/w21454.pdf>
- Cunha, F., and J. Heckman. 2007. The Technology of Skill Formation, *American Economic Review* 97 (2): 31–47.

- EDBs. (2014). Overview of Early Childhood Education in Korea, Education Bureau, Hong Kong. Retrieved from Education Bureau, Hong Kong: http://www.edb.gov.hk/attachment/en/edu-system/preprimary-kindergarten/preprimary-voucher/Seoul_PPT_i.pdf
- ECDA. (n.d.). Explore a career in early childhood, ECDA. Retrieved from ECDA: <https://www.ecda.gov.sg/eccareers/Pages/GetStarted.aspx>
- FPG. (1999). *Early learning, later success: The Abecedarian Study*, Frank Porter Graham Child Development Institute. Retrieved from FPG: http://fpg.unc.edu/sites/fpg.unc.edu/files/resources/reports-and-policy-briefs/EarlyLearningLaterSuccess_1999.pdf
- Formen, A. & Nuttall, J. (2014). Tensions between discourses of development, religion, and human capital in early childhood education policy texts: The Case of Indonesia, Springer
- Hamano, T. (2010). Trends in Early Childhood Education in Vietnam—The “Socialization of Education” and the Management of Disparity, Child Research Net. Retrieved from Child Research Net: http://www.childresearch.net/projects/ecec/2010_04.html
- Hasan, A., Hyson, M., & Chang, M. (2013). Early Childhood Education and Development in Poor Villages of Indonesia, Strong Foundations, Later Success, The World Bank. Retrieved from The World Bank: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/06/17/000442464_20130617121704/Rendered/PDF/784840PUB0EPI0000PUBDATE06011020130.pdf
- Heckman, J. (2006). *Skill Formation and the Economics of Investing in Disadvantaged Children*. *Science* 312: 1900–1902.
- Heckman, J. (2008). The Case for Investing in Disadvantaged Young Children, article provided by Ifo Institute for Economic Research, DICE journal, University of Munich, Volume 6, 2008, Issue 2, 7th Month, pages 3-8
- Heckman, J. (2012). *An Effective Strategy for Promoting Social Mobility*, University of Chicago. Retrieved from University of Chicago: https://heckman.uchicago.edu/sites/heckman2013.uchicago.edu/files/uploads/BostonReview_Heckman_2012-07-02c_cmh.pdf
- Hu, B.Y., & Szente, J. (2009). Exploring the Quality of Early Childhood Education in China: Implications for Early Childhood Teacher Education, *Journal of Early Childhood Teacher Education*, 30:3, p. 247-262
- Jung, H., Hasan, A. (2014). The impact of Early Childhood Education on Early Achievement Gaps, Evidence from the Indonesia Early Childhood Education and Development (ECED) Project, The World Bank. Policy Research Working Paper 6794
- Li, K., Pan, Y., Hu, B., Burchinal, M., De Marco, A., Fan, X. & Qin, J. (2016). Early childhood education quality and child outcomes in China: Evidence from Zhejiang Province, *Early Childhood Research Quarterly* 36 (2016), p. 427-438.
- Kamerman, S. (2006). *A global history of early childhood education and care*, background paper prepared for the Education for all Global Monitoring Report 2007, Strong foundations: early childhood care and education, UNESCO.

- KICCE. (2013). *KICCE Policy Brief, Issue 2, KICCE*. Retrieved from KICCE: http://kicce.re.kr/eng/newsletter_mail/pdf/201401_brief.pdf
- KICCE. (2015). *KICCE Policy Brief, Issue 5, KICCE*. Retrieved from KICCE: http://www.kicce.re.kr/eng/publication/05.jsp?mode=view&idx=18550&startPage=0&listNo=5&code=policybrief&search_item=&search_order=&order_list=10&list_scale=10&view_level=0
- Kwon, Y. (2004). Early childhood education in Korea: discrepancy between national kindergarten curriculum and practices, *Educational Review*, 56:3, p. 297-312
- Liu, Y. & Feng X. (2005). Kindergarten educational reform during the past two decades in mainland China: achievements and problems, *International Journal of Early Years Education*. Retrieved from the International Journal of Early Years Education: <http://www.tandfonline.com.libproxy.nie.edu.sg/doi/pdf/10.1080/09669760500170933>
- Mcmullen, M. et. al. (2005). *Comparing beliefs about appropriate practice among early childhood education and care professionals from the U.S., China, Taiwan, Korea and Turkey*, *Early Childhood Research Quarterly* 20 (2005), p. 451-464. Retrieved from *Early Childhood Research Quarterly*: https://www.researchgate.net/profile/James_Elicker/publication/223911127_Comparing_beliefs_about_appropriate_practice_among_early_childhood_education_and_care_professionals_from_the_U.S._China_Taiwan_Korea_and_Turkey/links/0046352d917a0c84cb000000.pdf
- MOE. (n.d.). Pre-School, Nurturing Early Learners Curriculum, MOE. Retrieved from MOE: <https://www.moe.gov.sg/education/preschool>
- MOE. (2010). Motion on Pre-School Education, Parliamentary Replies, MOE. Retrieved from MOE: <http://www.moe.gov.sg/media/parliamentary-replies/2010/11/pre-school-education.php>
- Moffitt, T. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy, *Psychological Review*, Vol. 100, No. 4, p. 674-701
- OECD. (n.d.). *Starting Strong III: A quality toolbox for ECEC, OECD*. Retrieved from OECD: <http://www.oecd.org/education/school/startingstrongiiiqualitytoolboxforecec.htm>
- OECD. (2012). Quality matters in early childhood education and care, Korea 2012, OECD. Retrieved from OECD: <http://www.oecd.org/education/school/50219964.pdf>
- Pan, Y. and Liu, Y. (2008). "A Comparison of Curricular Practices in Chinese Kindergartens: The Influences of Curriculum Reform." *International Journal of Early Childhood* 40, no. 2: 33–48.
- Phan, T. (2012). Current curriculum and pedagogy reform in Vietnamese Early Childhood Education: A socio-historic interpretation, *Asia Pacific Education: Diversity, Challenges and Changes*, Chapter 6. Edited by Philip Wing Keung Chan, Monash University Publishing.
- Pungello, E., Campbell, F. A., & Barrett, W.S. (2006). *Poverty and Early Childhood*

- Educational Intervention*, Frank Porter Graham Child Development Institute.
Retrieved from Frank Porter Graham Child Development Institute:
<http://www.law.unc.edu/documents/poverty/publications/pungelloandcampbellpolicybrief.pdf>
- Ramey, C.T., Campbell, F.A., Burchinal, M., Skinner, M.L., Gardner, D.M., and Ramey, S.L. (2000). *Persistent effects of early childhood education on high-risk children and their mothers*, *Applied Developmental Science*, vol. 4(1), pp. 2-14
- Sadasivan, V. (2010). *Notice for the Sitting on Parliament on 22nd November 2010*, *The Online Citizen*. Retrieved from The Online Citizen:
<http://www.theonlinecitizen.com/wp-content/uploads/2010/11/Viswa-Sadasivan-24nov-speech.pdf>
- Sardjunani, N., Suryadi, A., & Dunkelberg, E. (2007). Indonesia: Public Financing of Block Grants for Privately delivered services, *Early Childhood Development, from Measurement to Action*, Chapter 13, p. 233-252, The World Bank
- Save the Children. (2014). *Towards Quality Early Childhood Education in Vietnam*, Save the Children, Vietnam. Retrieved from Save the Children, Vietnam:
<https://vietnam.savethechildren.net/news/towards-quality-early-childhood-education-vietnam>
- Schweinhart, L. J., Montie, J., Xiang Z. P., Barnett, W. S., Belfield, C.R. & Nores, M. (2005). *The High/Scope Perry Preschool Study through age 40*, High/Scope® Educational Research Foundation.
Retrieved from High/Scope® Educational Research Foundation:
http://www.highscope.org/file/Research/PerryProject/specialsummary_rev2011_02_2.pdf
- Shonkoff, J. P. & Phillips, D. A. (eds). (2000). *From neurons to neighborhoods: The science of early child development*. Washington, D.C: National Academy Press.
- Song, Z., Zhu J., Xia, Z. & Wu, X. (2014). The early childhood education of disadvantaged children in China, *European Early Childhood Education Research Journal*, 22:3, p. 355-365.
- Sparling, J. & Lewis I. (1979). *LearningGames for the First Three Years: A Guide to Parent/Child Play*. New York, NY: Berkley Books
- Sparling, J. & Lewis I. (1984). *LearningGames for Threes and Fours*. New York, NY: Walker and Company.
- The Heckman Equation. (n.d.). About Professor Heckman, The Heckman Equation. Retrieved from The Heckman Equation: <http://heckmanequation.org/about-professor-heckman>
- [Thu, H. D. \(2010\). An exploration of Reggio Emilia-inspired practice in China and Vietnam – A meaning making process, ProQuest. Retrieved from ProQuest: http://media.proquest.com/media/pq/classic/doc/2681517271/fmt/ai/rep/NPDF?s=%2FA2iucrVU7bcAFmSvklrnAv4Oc8%3D](http://media.proquest.com/media/pq/classic/doc/2681517271/fmt/ai/rep/NPDF?s=%2FA2iucrVU7bcAFmSvklrnAv4Oc8%3D)
- Tobin, J. (2007). "An Ethnographic Perspective on Quality in Early Childhood Education." In *Global Perspectives on Early Childhood Education*, ed. J.X. Zhu, 131–43. Shanghai: East China Normal University Press.

- Tobin, J. (2005). Quality in Early Childhood Education: An Anthropologist's Perspective, *Early Education & Development*, Volume 16, Number 4, October 2005
- Tobin, J., Jay, D., Wu, Y.; Davidon, D. (1989). *Preschool in Three Cultures: Japan, China, and the United States*. New Haven: Yale University Press
- Ng, J. & Chia, A. (2014). Lessons for Singapore from Asia's pre-schools, Lien Foundation. Retrieved from Lien Foundation:
<http://www.todayonline.com/singapore/lessons-spore-asias-pre-schools>
- UNESCO. (1990). *Meeting Basic Learning Needs: A Vision for the 1990s*, UNESCO. Retrieved from UNESCO:
<http://unesdoc.unesco.org/images/0009/000975/097552e.pdf>
- UNESCO. (n.d.). *Education for all Goals*, UNESCO. Retrieved from:
<http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/>
- UNESCO. (2000). The Dakar Framework for Action, Education for all: Meeting our collective commitments, UNESCO. Retrieved from:
<http://unesdoc.unesco.org/images/0012/001211/121147e.pdf>
- UNESCO. (2007). *Partnership with Non-Public Actors: Singapore's Early Childhood Policy*, UNESCO. Retrieved from UNESCO:
<http://unesdoc.unesco.org/images/0014/001494/149486e.pdf>
- UNESCO. (2014). UNESCO Education Strategy, UNESCO. Retrieved from:
<http://unesdoc.unesco.org/images/0023/002312/231288e.pdf>
- UNESCO & UNICEF. (2012). *Asia-Pacific End of Decade Notes on Education For All, EFA Goal 1, Early Childhood Care and Education*, UNESCO. Retrieved from: <http://unesdoc.unesco.org/images/0021/002171/217145e.pdf>
- UNESCO. (2015-a). *EFA Global Monitoring Report, 2015, Education for all 2000-2015: Achievements and Challenges*, UNESCO. Retrieved from:
<http://unesdoc.unesco.org/images/0023/002322/232205e.pdf>
- UNESCO. (2015-b). Education for All 2015 National Review, UNESCO. Retrieved from UNESCO: <http://unesdoc.unesco.org/images/0022/002297/229721E.pdf>
- UNICEF. (2014). *Early Childhood Education Forum highlights achievements and future needs*, UNICEF. Retrieved from UNICEF:
http://www.unicef.org/vietnam/media_22602.html
- Weikart, D.P., Bond, J.T. and McNeil, J.T. (1978). The Ypsilanti Perry Preschool Project: Preschool Years and Longitudinal Results Through Fourth Grade, Ypsilanti, MI: Monographs of the High/Scope Educational Research Foundation.
- Yun, E. (2009). *Places for Educating and Caring for Young Children in Korea: Where are our children edu-cared?*, *Child Research Net*. Retrieved from Child Research Net: http://www.childresearch.net/projects/ecec/2009_06.html
- Zhao, L. & Hu, X. (2008). *The development of early childhood education in rural areas in China*, *Early Years*, 28:2, p. 197-209, Routledge Taylor & Francis.
- Zhu, J. (2008). Early childhood teacher education in China, *Journal of Education for Teaching*, p. 361-369, Taylor & Francis.
- Zhu, J. & Zhang, J. (2008). Contemporary trends and developments in early childhood education in China, *Early Years*, Early Years, 28:2, p. 173-182